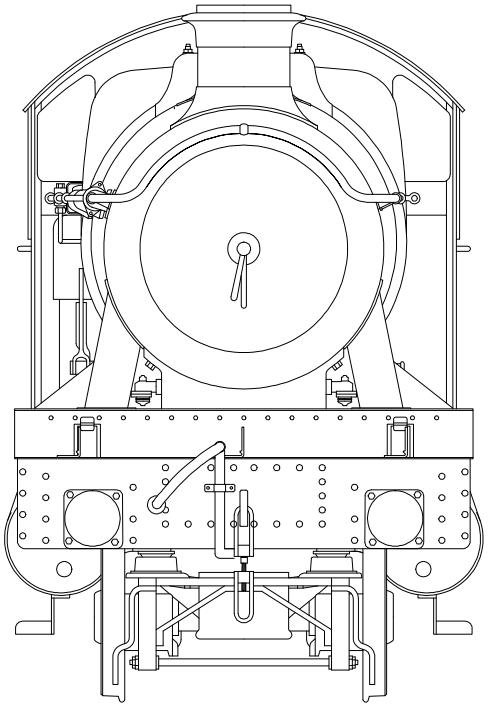
GWR HALL LOCOMOTIVE



CAUTION.

This product contains etched parts with very sharp edges and castings that may contain lead. Neither the Manufacturer, Distributor or Retailer can accept any liability for illness, injury or consequential damage caused when handling or building this product.

Read any instructions before assembly. Do not eat or drink whilst handling. Wash hands after use.

BRIEF HISTORICAL DETAILS

In 1924 Mr. C B Collett responded to the Running Department's request for a more powerful mixed traffic engine to surpass the 43XX Moguls by rebuilding one of George Jackson Churchward's classic 'Saints' (No. 2925 Saint Martin) with 6ft. coupled wheels. In 1928, after four years of extensive evaluation, the first of 258 production engines were introduced with several differences from the prototype including increased boiler pitch, reduced bogie wheel diameter, outside steam pipes and modified motion and frames.

For a detailed history of this long lived class Part Eight of 'The Locomotives of the Great Western Railway' published by the RCTS is essential reading. Other valuable sources of information and photographs are

Collett & Hawksworth Locomotives - Brian Haresnape - Ian Allan

The 4mm Engine - Guy Williams - Wild Swan which includes some of the drawings listed below.

The following Swindon drawings were used in designing the kit:

85461	5/1928	Lot 254	Arrangement of Bogie
86101	5/1929	Lot 254	Frame Plan
86102	3/1929	Lot 254	Cross sections
87997	11/1933		Arrangement of Boiler Mountings

Lot	Numbers	Built	Valve spindle crosshead guides	Spring compensation	ATC as built
254	4901-20	Dec '28 - Mar '29	Yes	Yes	No
	4921-40	Apr '29 - Jul '29	Yes	Yes	Yes
	4941-50	Jul '29 - Aug '29	Yes	Yes	Yes
	4951-77	Jul '29 - Jan '31	Yes	Yes	Yes
	4978-80		No	Yes	Yes
268	4981-99	Dec '30 - Mar '31	Yes	Yes	Yes
	5900		Yes	No	Yes
275	5901-20	May '31 - Aug '31	Yes	No	Yes

VARIATIONS POSSIBLE WITH THE KIT

Valve spindle crosshead guides. These were fitted new, as above, but later removed.

Spring compensation beams. These were fitted new, as above, but gradually removed.

ATC equipment. This was fitted to 4921 and later locos when built and applied to Nos. 4901-4920 in 1930.

Top feed pipes. The top feed pipes on 4901 to around 4922 passed through the footplate in front of the centre splasher. On later engines, it passed over the centre splasher and through the footplate alongside the rear splasher.

Lamp bracket. This was moved to smokebox door between 1934-39.

Rear sandboxes. These were originally placed under the cab floor and filled from inside the cab. Later they were replaced with boxes behind the rear steps and filled from outside the cab.

Whistles. In their last years, a few of the engines had their whistles removed from the cab roof to a position on top of the firebox and some acquired a whistle shield.

TENDERS

When built the first 20 engines or so were paired with second-hand 3500 gallon tenders of standard Churchward design. At least two Nos. 4959 & 4960 were paired with 3500 gallon intermediate tenders. Many, but not all, from 4922 up to around 4958, were paired with new Collett 3500 gallon tenders and from 4961 new 4000 gallon Collett tenders became the norm, although several including 5900 came out with Churchward tenders. At various times Nos. 4918 & 5919 ran with the eight-wheel 4000 gallon tender. Subsequently the Collett 4000 gallon tenders became standard for the class although this process was very protracted some engines not receiving this tender until after WW2.

CHASSIS OVERVIEW

Note that many of the components for both chassis and body are handed left/right and care must be taken to ensure the correct component is used. Components are not always identified left/right separately but with care and common sense no problems should arise.

Before construction can commence you have to decide which particular chassis you are going to construct. The options are:

Gauge.

For Finescale, where little sideplay is required, the widest spacers can be used but they will need careful filing to make their width 26.0 mm. If you require your engine to negotiate sharp curves then the middle width spacers should be used.

The widest frame spacers supplied are suitable for Scaleseven and care will be needed to allow sufficient sideplay, especially in the leading axle to enable the model to negotiate moderate curves.

Suspension.

Rigid. The kit is supplied with top hat bearings to build a rigid chassis. Open out the main axle holes to accept top hat bushes and solder them in place. If the leading axle is 5/32" diameter then reduce the bearing diameter accordingly by fitting a sleeve from short lengths of the 3/16" tubing provided.

Sprung. If you are going to fit sprung horn blocks, you should open out the frame slots by cutting up the half etched lines and follow the manufacturers instructions.

Compensated. The simplest and most reliable suspension system is beam compensation and the necessary compensation beams are provided in the kit. Not provided are the hornblocks and bearings which are available as an extra item which includes instructions for aligning the hornblocks accurately.

Pickups. No pickup material is provided. The options are:

Scrapers. Attached to the middle frame spacer using printed circuit board.

Plunger. Open out holes P and fit according to the manufacturers instructions. It may not be possible to use plunger pickups if you wish to fit the inside motion because they may foul each other.

Split axle/frame. We leave this to you! Some useful information can be found at http://www.euram-online.co.uk/tips/splitaxle/splitaxle.htm.

COMPONENTS NOT SUPPLIED WHEELS

Driving wheel - 6' 0", 20 spoke, 3/16" diameter axle (3)Slater's Ref.7872GWH

Bogie/trailing wheel - 3' 1" diameter, 10 spoke, 5/32" diameter axle Slater's Ref.7837MF

Available from Slaters' (Plastikard) Ltd'

MOTOR/GEARBOX

A Canon motor with a SDMP 40L/15 gearbox (available from Finney7) or an alternative such as an ABC VML2 gearbox.

CRANKPINS

Steel crankpins are available from Finney7.

INSIDE MOTION

A separate kit is available from Finney7 to construct the working inside motion.